

1 **WHAT IS CLAIMED IS:**

2 1. An in-line skate wheel incorporating transverse-mounted and self-
3 powered illuminating device, comprising:

4 two mutually coupled first and second anchors, with the second anchor
5 having a recessed portion on the side facing the first anchor, such that when the
6 two anchors are joined together a chamber is defined in between walls of the two
7 anchors;

8 a ring-shaped rotor being placed in the chamber, wherein the rotor is
9 formed by a ring-shaped induction coil and two metal plates; the induction coil is
10 formed by a wire wound around a circular core; and the two metal plates are
11 joined together holding the induction coil therebetween, wherein a first end of
12 the induction coil is connected to the coupled metal plates; whereby the rotor is
13 able to revolve synchronously revolution of the two coupled anchors,

14 multiple illuminating devices being inserted on the rotor and in
15 transverse orientation, wherein each illuminating device has a first terminal and
16 a second terminal, the first terminal being electrically fixed on one of the two
17 metal plates, the second terminal being connected to a second end of the
18 induction coil;

19 a stator being fitted in the rotor, but not in physical contact with the
20 rotor;

21 an axle extending through the two coupled anchors and the stator; a
22 protective covering, made of translucent materials, being placed around the
23 circumference of the two coupled anchors;

24 wherein multiple gaps are defined in the two metal plates and

1 corresponding to the positions of the illuminating devices for accommodating
2 the illuminating devices, such that the terminals of the installed illuminating
3 devices do not touch the metal plates; and

4 multiple open slots are formed on the second anchor corresponding to
5 the positions of the illuminating devices for receiving the illuminating devices to
6 be installed on the rotor through the second anchor.

7 2. The in-line skate wheel as claimed in claim 1, wherein the
8 illuminating device is a light emitting diode (LED) that has two terminals
9 respectively connected to the two metal plates over the rotor.

10 3. The in-line skate wheel as claimed in claim 1, wherein two bearing
11 sleeves are fitted into respective notches on the outer wall of the two coupled
12 anchors to receive the axle.

13 4. The in-line skate wheel as claimed in claim 1, wherein the two metal
14 plates are joined together by welding.

15 5. The in-line skate wheel as claimed in claim 2, wherein the two metal
16 plates are joined together by welding.